REMARKS

Claims 1-14 are now pending in the application. Minor amendments have been made to the specification and claims to simply overcome the objections to the specification and rejections of the claims under 35 U.S.C. § 112. The amendments to the claims contained herein are of equivalent scope as originally filed and, thus, are not a narrowing amendment. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

CLAIM OBJECTIONS

Claims 5, 11, 13, and 14 are objected to for certain informalities. With respect to claims 5 and 11, Applicant amended the claims according to the Examiner's suggestions.

With respect to claims 13 and 14, Applicant amended claim 1 to recite "verifying" instead of "testing." Applicant amended claims 13 and 14 to recite "a semiconductor device" according to the Examiner's suggestions.

Applicant respectfully notes that the above amendments are not narrowing amendments.

DOUBLE PATENTING

Claims 1, 4, 5, 7, 10, 11, 13, and 14 are provisionally rejected under nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5, 6, 8, 12, 13, 15, and 16 of copending Application No. 10/806,481. Applicant includes herewith a terminal disclaimer.

REJECTION UNDER 35 U.S.C. § 112

Claims 1-7 are rejected under 35 U.S.C. § 112, first paragraph, failing to comply with the enablement requirement. This rejection is respectfully traversed.

The Examiner notes the specification refers to <u>verifying</u> a design and does not disclose <u>testing</u> a design as the claims recite. Applicant respectfully disagrees that the term "verifying" does not include the term "testing." However, Applicant amended the claims to recite "verifying" according to the Examiner's suggestions.

Claims 13 and 14 are rejected under 35 U.S.C. § 112, first paragraph, failing to comply with the enablement requirement. This rejection is respectfully traversed.

Applicant amended claims 13 and 14 to recite <u>a semiconductor device</u>. Applicant respectfully notes that the present invention is directed to verifying a design of electronic circuits (see Paragraph [0011]). For example, the specification discloses that an application specific integrated circuit (ASIC) and/or a system-on-chip (SoC) may include components such as flip-flops (see Paragraphs [0002] and [0003]). As such, Applicant respectfully submits that the specification includes support for the recitation of <u>a semiconductor device</u>.

Applicant respectfully submits that the above amendments are not narrowing amendments.

REJECTION UNDER 35 U.S.C. § 101

Claims 7-12 and 14 are rejected under 35 U.S.C. 101 because these claims refer only to "a ***computer program*** for testing" (i.e., does not include a new and useful process, machine, manufacture or composition of matter).

Claims 7-12 and 14 are now directed to a computer program <u>stored for use by a</u> <u>processor</u>. Per the USPTO guidelines at page 50, "functional descriptive material consists of data structures and computer programs which impart functionality when employed as a computer component ... When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized." **USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility", October 26, 2005**. "Claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory." **Page 53, USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility", October 26, 2005**.

No new matter has been entered by the foregoing amendment. For at least the foregoing reasons, claims 7-12 and 14 present statutory subject matter since they recite a computer program stored for use by a processor.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-14 are rejected under 35 U.S.C. § 102(e) as being anticipated by McMillan (U.S. Pat. No. 6,944,838). This rejection is respectfully traversed.

With respect to claim 1, McMillan fails to show, teach, or suggest a method for verifying a design of a circuit comprising checking a model using a first property and

an environment of the design at a reset state until an example of the first behavior occurs and checking the model using the second property and <u>an environment of the design at a state when the example of the first behavior occurs</u>.

For anticipation to be present under 35 U.S.C §102(b), there must be no difference between the claimed invention and the reference disclosure as viewed by one skilled in the field of the invention. *Scripps Clinic & Res. Found. V. Genentech, Inc.,* 18 USPQ.2d 1001 (Fed. Cir. 1991). All of the limitations of the claim must be inherent or expressly disclosed and must be arranged as in the claim. *Constant v. Advanced Micro-Devices, Inc.,* 7 USPQ.2d 1057 (Fed. Cir. 1988). Here, McMillan fails to disclose the limitation of checking the model using the second property and <u>an environment of the design at a state when the example of the first behavior occurs</u>.

As shown in exemplary embodiments in FIGS. 1A-1C and FIG. 2, a first property 106A and a first environment 104A are input to a model checker 100. A process 200 as shown in FIG. 2 executes until a counterexample occurs at step 208 (Paragraph [0023]). When the counterexample occurs, the process 200 "captures the state of the model 102 for the example of the predetermined behavior, and checks model 102 again, this time starting from the state of the model 102 for the example of the predetermined behavior, and using a property that describes a desired behavior of the design."

In other words, the process 200 checks the model 102 using a second environment (i.e. an environment of the design at a state when the example of the behavior first occurs) and a second property (i.e. the desired behavior). The second environment is the state of the model 102 when the predetermined behavior occurred.

For example, after finding a counterexample in step 208, FIG. 2 includes a step 212 to "provide environment at state of model for counterexample and property that describes intended behavior."

As best understood by Applicant, McMillan is absent of any teaching or suggestion of checking the model using an environment of the design at a state when the example of the first behavior occurs. The Examiner alleges that FIGS. 1 and 2 and Column 2, Line 29 through Column 5, Line 48 disclose this limitation. Applicant respectfully disagrees. As shown in FIG. 2, a counterexample is found in step 230. If the counterexample is found during a first iteration, the process ends. If it is not the first iteration, K is increased in step 234 and the process performs additional iterations. For example, a model checker 130 performs the process "to a depth of K steps." (Column 3, Lines 33-36). In other words, when a counterexample is found, K is increased and step 220 repeats (i.e. step 220 performs "bounded model checking for K steps" as shown in FIG. 2). As such, the environment changes and is not an environment of the design at a state when the example of the first behavior occurs as claim 1 recites. McMillan appears to be absent of any teaching or suggestion of this limitation.

Applicant respectfully submits that claim 1, as well as its dependent claims, should be allowable for at least the above reasons. Claim 7, as well as its dependent claims, should be allowable for at least similar reasons.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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